BOTANICAL GAZETTE.

VOL. 3 SEPTEMBER, 1878. No. 9

OROBANCHE MINOR. IN NEW JERSEY.—In the early part of June I collected near Haddonfield in New Jersey, about five miles from Camden, a specimen of *Orobanche minor*. This plant has been on my mind for a long while, as I had seen a few specimens that were said to have been collected in this vicinity some years ago. The addenda to the last edition of Gray's Manual mentions it, as having been found "in the vicinity of Washington, and has been met with in New Jersey; but it may not long abide." As is well known this class of plants are parasites on the roots of other plants, and this species is mentioned as being parasitic on clover. It is a native of Europe where it is one of the widest spread species, extending into Asia. The finding of a single plant was an occasion for me to rejoice, but about an hour later I detected it in great abundance, hundreds if not thousands of specimens within a space of two or more acres. The owner of the property states that this is the second year he has noticed it in the yard attached to his dwelling, but could give no reason for its presence there. The ground had not been disturbed for years; no grass seed had been recently sown, nor fertilizers applied, whereby the seed could have been introduced; it seems, therefore, very singular that it should appear in such abundance and from no ascertainable cause. The height of the specimens varied from three inches to two feet two inches, and only in this extraordinary size does it differ from the European plant. The parasitic habit was easily determined, and generally was found attached to the roots of *Trifolium pratense*, sometimes, however, on *Trifolium repens* and *Poa pratensis*, but very often it was growing independent of the foster plant entirely. Sometimes the attachment was on the main roots, often on the lateral rootlets, generally one specimen in a place, but in one instance eight specimens were growing on a single clover root. The purple appearance of the flowers was very manifest, but one robust plant attracted my attention by its yellowish color; this on examination I found to be attached to the roots of Wild Carot, *Daucus Carota*. This specimen, according to DeCandolle, is *Orobanche minor*, var., *flaccescens*, at one time regarded as a distinct species, under the name of *Orobanche Carota*. One week later I collected a specimen on the deposits of ballast at Camden, N. J., growing on *Trifolium repens*; this is the first instance of a parasitic plant occurring on our ballast grounds.

At a recent meeting of the Botanical section of the Academy of Natural Sciences of Philadelphia, considerable discussion was had, as to the manner of the attachment being formed, whether the seed germinated near the surface of the ground, and sent a radicle downward until it reached a root to cling to, or whether the attachment was made while the root was near the surface, and carried into the ground in some other way. On a second visit to the locality, I collected a specimen that seemed to illustrate the case, as the clover root, at a depth of three inches below the surface of the ground, had on it an abundance of the roots of the *Orobanche*, attached, so as to resemble moniliform bulblets, or in a diminutive way, strings of onions. These were examined under the microscope and the tissues of the two plants were found to be so closely interwoven, as to render it uncertain as to the point of union. In this case it was evident that the attachment was made under ground, as the growth of the root of the clover would be from the extremity, and consequently could not carry such a substance from the surface of the ground downward.

This species (whether it is so in all I cannot say,) has an enlargement or thickening of the base of the stem, sometimes an inch in diameter, and somewhat in appearance, like the corm of the Indian Turnip, with the little fascicle of roots coming out at the side instead of at the bottom part. It is not unlikely that these may retain sufficient vitality to preserve the plant over winter, as many specimens showing no attachment to the roots of any other plant were attached in a cluster around one of these thickened bases, the upper part of the plant having long since decayed. On cutting one of them open it was found to be as firm and solid as those of a growing plant.

Withering, in his Arrangement of British plants, speaks of this species as being "a destructive weed in Surrey and Essex, highly injurious to the clover crops." Whether it may become so in this country or not, only the future can determine, but no little anxiety and even alarm was felt in the neighborhood, when it became known what the plant was. A single specimen will produce sufficient seed to stock the whole neighborhood, and unless these hardened bases should be found to retain vitality for several years, the early mowing of clover fields will prevent its increase, and probably destroy it entirely.—ISAAC C. MARTINDALE, *Camden, New Jersey.*

A LIST OF SOME OF THE MOST INTERESTING SPECIES OF PLANTS COLLECTED IN THE INDIAN TERRITORY; BY GEO. D. BUTLER.—[concluded from p. 68.]

Liatris elegans, Willd. Sandy woods.

Liatris punctata, Hook. Dry prairie hills and sulphate flats.

Aster paludosus, Ait. Rich prairies, uncommon.

Aster sericeus, Vent. Sandstone ridges.

Aster anomalus, Engelm. Sandy woods.

Erigeron divaricatum, MX. Roadsides.

Erigeron tenue, T. & G. Sulphate flats; common.

Chætopappa asteroides, DC. The smallest plant of my acquaintance in this family, and the earliest in bloom. The liguiate flowers are curled back soon after opening. Sandstone hills.

Amphiachyris dracunculoides, DC. The tough, elastic stems and branches make good brooms. Yards, common.

Grindelia lanceolata, Nutt., var. *latifolia*, Engelm. Stem low and simple or sparingly branched (sulphate flats), or tall and widely branched (fields and fence rows); heads large; leaves elliptical, sessile, cuspidate, serrate.

Chrysopsis villosa, Nutt. Sulphate flats.

Heterotheca scabra, DC. Fort Smith.

Silphium scaberrimum, Ell. Low prairies.

Engelmannia pinnatifida, T. & G. Limestone.

Iva ciliata, Willd. Wet places

Iva angustifolia, Nutt. Sulphate flats.

Rudbeckia alismæfolia, T. & G. Prairies, common.

Dracopis amplexicaulis, Cass. Wet prairies.

Helianthus lenticularis, Dougl. Fields, introduced.

Helianthus rigidus, Desf. Prairies.

Helianthus mollis, Lam. Prairie knolls.

Coreopsis aristosa, Michx. Low prairies.

Coreopsis lanceolata, var? Every way larger, especially the darker colored achenes. Limestone cliffs.

Coreopsis tinctoria, Nutt. Very common.

Coreopsis grandiflora, Nutt. Prairies, common.

Coreopsis discoidea, T. & G. Pools, on *Cephalanthus*. During the rainy season when the pools are well filled with water, the floating seeds lodge against the *Cephalan-*

thus, and these sprouting, their roots run down enveloping the stem of the shrub with a tangled mass, often for a distance of two feet or even more, presenting a curious sight toward the close of the dry season when the pools have dried up and the *Coreopsis* is in bloom.

Thelesperma filifolium, Gray. Limestone.

Gaillardia lanceolata, Michx. Prairie knolls.

Hymenopappus corymbosus, var. *Nuttallianus*, T. & G. Limestone.

Helenium tenuifolium, Nutt. Introduced.

Leptopoda brachypoda, T. & G. Pools, rather common.

Centaurea Americana, Nutt. Four to seven feet high in fields, in prairies with smaller heads and stems 1–2 feet high, common.

Apogon humilis, Ell. Wet places, common.

Krigia occidentalis, Nutt. Prairies.

Pyrrhopappus Carolinianus, DC. Prairies.

Lobelia appendiculata, DC. The most common Lobelia in this region. Also in Franklin county, Ark., "Near Little Rock and at Memphis" *Engelmann*. (This is the plant referred to in "Additions to the Flora of Arkansas," see BOTANICAL GAZETTE, Vol. 2, p. 104, where it was called *L. breviflora*).

Specularia perfoliata, DC. Rather common.

Specularia Ludoviciana, Torr. The most common species of prairies, woods and sulphate flats.

Specularia leptocarpa, Gray. Sulphate flats and dry hills.

Vaccinium arboreum, Michx. Rocky woods, common.

Ilex decidua, Walt. Rocky streams.

Bumelia lanuginosa, Pers. Dry woods.

Plantago pusilla, Nutt. Very common. Large specimens have toothed leaves.

Plantago heterophylla, Nutt. Sulphate flats, rare.

Plantago Patagonica, var., *gnaphalioides*, Gray. Prairie knolls.

Plantago Patagonica, var., *spinulosa*? Gray. Prairie knolls.

Plantago Patagonica, var., *aristata*, Gray. Sulphate flats.

Androsace occidentalis, Pursh. Common.

Centunculus minimus, L. Sulphate flats.

Hottonia inflata, Ell. Arkansas river.

Bignonia capreolata, L. Red river.

Catalpa bignonioides, Walt. Arkansas river.

Pentstemon gracilis, Nutt. Dry prairies.

Pentstemon laevigatus, Sol., var., *Digitalis*, Gray. Prairies.

Gerardia grandiflora, Benth. Dry woods.

Castilleia purpurea, Nutt. Perennial, stems cæspitose. Not parasitic? Limestone cliffs.

Hedeoma hispida, Pursh. Common.

Salvia azurea, Lam. Prairies.

Monarda fistulosa, L. Rich prairies and thickets.

Monarda Bradburiana, Beck. Cherokee Nation.

Monarda Russelliana, Nutt. Stem simple and erect or slightly branched and decumbent at the base, $1\frac{1}{2}$–3 feet high; leaves few, short-petioled, ovate-lanceolate, rounded at the base, serrate, dark green; whorls always terminal; bracts purple tinged, acute at each end; calyx curved; corolla white, slender, $1\frac{1}{2}$ inch long, smooth, the lower lip dotted with red purple; angles of the stem, margins of the leaves and bracts, and throat and tube of the calyx very pubescent. Corollas slowly centrifugal, so that while any one lasts but 2 or 3 days, a head will be in flower for a month or more.

There are seldom more than 6 flowers expanded at once, usually only two or three. Dry woods.

Monarda aristata, Nutt. Common on limestone.

Monarda punctata, L. Scarce.

Myosotis macrosperma, Engelm. Larger than the very common *M. verna* of which it seems to be a form, but more slender and with larger calyx and nutlets. Alluvial or damp woods, not uncommon.

Heliotropium Indicum, L. Fort Smith, introduced.

Phacelia parviflora, var., *hirsuta*, Gray, *P. hirsuta*, Michx. Thickets, rather frequent.

Phacelia strictiflora, Engelm. and Gray. Sulphate flats, common.

Hydrolea ovata, Nutt. Common in pools, beds of rocky streams in Arkansas, "In La. and Texas."

Gilia coronopifolia, Pers. Thickets and prairies.

Cuscuta inflexa, Engelm Thickets, on herbs and shrubs.

Cuscuta decora, Chois. Prairies.

Cuscuta decora, var., *indecora*, Engelm. Sulphate flats.

Cuscuta arvensis, Beyrich. Low prairies.

Cuscuta cuspidata, Engelm. Prairies.

Cuscuta glomerata, Chois. Rich prairies.

Solanum rostratum, Dunal. Introduced from the western plains.

Physalis lanceolata, var.? *hirsuta*, Engelm. Rough pubescent, erect and branching; leaves oval to oblong, large, entire. Dry soil.

Sabbatia angularis, Pursh. Prairie knolls.

Sabbatia campestris, Nutt. Very common.

Asclepias obtusifolia, Michx. Prairies.

Asclepias stenophylla, Gray. Prairies.

Acerates viridiflora, Ell. Leaves usually lance-ovate to lanceolate.

Acerates longifolia, Ell. Dry soil

Acerates auriculata, Engelm. Rare.

Asclepiodora viridis, Gray. Prairies, common.

Oxybaphus nyctagineus, Sweet. Thickets.

Oxybaphus oblongifolius, Gray. Apparently distinct. High prairies.

Oxybaphus angustifolius, Sweet. Sulphate flats.

Alternanthera Achyrantha, R. Br. Sulphate flats.

Eriogonum longifolium, Nutt. Limestone.

Rumex Engelmanni, Ledeb. Sulphate flats.

Phoradendron flavescens, Nutt. Mostly on *Ulmus alata*.

Euphorbia dictyosperma, F. & M. Common.

Euphorbia heterophylla, L. Banks of streams, rare.

Euphorbia petaloidea, Engelm. Limestone.

Jatropha Texana, Mull. Caddo.

Stillingia sylvatica, L. Exclusively in prairies on knolls, not uncommon.

Tragia urticaefolia, Mx. Common.

Croton glandulosus, L. Sandy woods.

Croton capitatus, Michx. Sulphate flats

Croton Lindheimerianus Scheele (1852. Not Torrey in Bot. Bound., nor DC. Prod.: *C. entrigynus*, Gray.). Old fields and roadsides, appearing as if introduced, but also occurring rarely in sulphate flats. Also on M. K. & T. R. R., about 7 miles southwest of Fort Scott, Kansas.

Croton monanthogynus, Michx. Arkansas river.

Crotonopsis linearis, Michx. Sandy woods.

Andrachne Raemeriana, Mull. Limestone, "In Ark.," *Engelmann.*

Maclura aurantica, Nutt. Common.

Quercus Muhlenbergii Engelm. Limestone.

Castanea pumila, Michx. San Bois Mt and northeastward into Ark. and Mo.

Sagittaria graminea, Michx. Leaves 1–1½ inches wide.

Spiranthes vernalis, Engelm. & Gray. June and July. Much earlier than *S. gracilis?* Prairies.

Cooperia Drummondii, Herbert. Bulb 4–6 inches beneath the surface. I never found it in wet places, but on sulphate flats and dry prairie hills.

Nemastylis cœlestina? Nutt. Single flowered at the summit, and another *fertile(?)* flower concealed beneath a bract 3–6 inches lower down. Stem very slender. Prairies, *isolated*, uncommon.

Nemastylis acuta? Engelm. & Gray. (*N. geminiflora?* Nutt.) 2–several flowered. Prairies, common.

Amianthium muscætoxicum, Gray. Parts of the flower often in fours. Limestone.

Scilla Fraseri, Gray Common.

Allium mutabile, Michx. Prairies, common.

Yucca angustifolia, var., *mollis*, Engelm. Dry hills.

Commelyna angustifolia, Michx. Dry sandy woods.

Tradescantia Virginica, L. Flowers sometimes white and rarely rose colored. A form occurs with flowers about 2 inches in diameter and about 2 weeks earlier, with the wider leaves lineate with glandular dots. Common.

Cyperus rotundus, Willd.

Cyperus ovularis, Torr.

Scirpus lineatus, Michx.

Fimbristylis spadicea? Vahl.

Isolepis carinata, H. & A.

Scleria hirtella, Sw.

Carex acuta? L.

Alopecurus aristulatus, Michx. Pools, common.

Aristida purpurea, Nutt. Dry prairies.

Bouteloua hirsuta, Lag. Dry hills.

Gymnopogon racemosus, Beauv. Dry woods.

Tricuspis stricta, Thurb. Low prairies, not uncommon.

Arundinaria tecta, Muhl. Found in bloom April 26th.

Lepturus paniculatus, Nutt. Dry prairies.

Hordeum pusillum, Nutt. Sulphate flats.

Elymus striatus, Willd Common.

Phalaris intermedia, Besc. Common.

Paspalum Walterianum, Schultes. Overflowed situations.

Paspalum Floridanum, var., *glabratum*. Glabrous: spikes thicker and longer; culm stouter. Prairies.

Panicum dichotomum, var., *nitidum*, Gray. Common

Panicum dichotomum, var., *scoparium*, Engelm. (*P. scoparium*, Lam.)

Setaria glauca, Beauv., var. Perennial and stoloniferous; apparently indigenous. Prairies, common.

Rottbœllia cylindrica? Chapm. Prairies, common.

Tripsacum dactyloides, L. Low prairies.

Sorghum arenaceum, Chapm. Prairies.

Cheilanthes lanuginosa, Nutt. Dry sandstone.

Ophioglossum vulgatum, L. Rather common.

Isoetes melanopoda, J. Gay.

Isoetes Butleri, Engelm., n. sp. See BOT. GAZ., Vol. 3, No. 1, p. 1.

Nearly all the species mentioned in the above list were verified by Dr. Geo. Engelmann.

[As we have, perhaps thoughtlessly, admitted to our pages articles not very complimentary to Mr. J. C. Arthur, it is but simple justice that the following answer be published.—EDS.]

AS REGARDS THE FLORA OF IOWA.—During the last year several articles* have appeared in print derogatory to the exhibit of the Iowa flora, as shown by my pamphlet, entitled "Contributions to the flora of Iowa." It is due to myself, and to all who may have occasion to use the Catalogue, that these receive some notice.

In the BOTANICAL GAZETTE for October, 1877, is "An Explanation." It says there has been made "a very unfortunate mistake for the credit of our State Flora, on the part of the authors (it is incomprehensible how I can be spoken of in the plural number) of our Catalogue, who report only 979 plants, while our whole number must be twice as many." Then follows a disparaging comparison with the 2,034 species of the Nebraska Catalogue, in which there is no mention that the latter contains 363 cryptogams, a class of plants not included in the Iowa list. The writer is then charged with gross negligence in preparing the Catalogue, etc., etc.

The facts are these: In the preparation of the Iowa Catalogue no efforts were spared to make it as complete as possible. A tour of the State was made in order to secure a personal consultation with every botanist and an examination of each herbarium then known to the writer. Moreover every precaution was taken to prevent mistakes in the determination. When the evidence of authenticity was not satisfactory, the locality was given in a foot-note, so as to hold the person reporting it responsible. Mere lists without the specimens received but little attention. Such a strict surveillance naturally excluded many names which might otherwise have been used. The object was to make a list of plants *known* to be growing in the State, and to exclude all others however *probable* it might seem that they were natives. Such has also been the aim in making the additions (published in the Proc. Dav. Acad. Nat. Sci.) to the Catalogue. In these addenda names have been expunged, changed, or added, as required by later information. Printed copies are distributed to all Iowa botanists and to such others as desire them.

*See BOT. GAZ. vol. 2, pp. 73, 107, 114 and 143: also Bull. Torr. Bot. Cl., March. 1878.

As regards the method of publishing additions to the State flora, I cannot think that the indiscriminate and irresponsible use of the columns of botanical periodicals (better filled with other matter) for local floras, is at all conducive to accuracy. To make a short and clear proof of this statement, I have tabulated all the additions to the Iowa flora one person has published in this manner; and as this is done through no ill will, but with the best of intentions, all doubts in the discrimination have been resolved in his favor:

	BOT. GAZ. Jan. '77.	BOT. GAZ. June '77.	BOT. GAZ. Oct. '77.	TORR. BULL. Mar. '78.	Total.	Per cent.
Correct and subsequently published	8	4	0	12	24	28
Correct but already published	3	0	0	21	24	28
Doubtfully determined	6	2	1	2	11	13
Incorrectly determined	5	5	4	4	18	21
Without the scope of the Catalogue	5	1	1	1	8	10
Total	27	12	6	40	85	100

This shows that only 28 per cent. were *bona fide* additions, that an equal number should not have been published, over a fifth were incorrectly named, and 10 per cent. were of plants with which the Catalogue has nothing to do. Truthful information is earnestly desired, but such as the above table shows to have been published is misleading and worse than none.—J. C. ARTHUR, *Agricultural College, Ames, Iowa.*

MONOTROPA UNIFLORA.—We read with much pleasure and profit Dr. Kunze's notes upon *Monotropa uniflora*, and we are glad that our former note called them out. While acknowledging that the weight of the Doctor's practical experience militates strongly against our previous statement, we still think the evidence in the case warranted us in making a pretty strong statement of probable poisoning. Since some grave doubts have been thrown upon the correctness of our attributing the toxic influences mentioned to *Monotropa uniflora*, we have again investigated the case and have evidence that seems rather to strengthen our former statement. This matter we give to the readers of the GAZETTE for their own conclusions.

The young lady, concerned, did not gather the plant in the woods, and hence could not have been poisoned by coming in contact with *Rhus* in that way. She re-affirms her belief that she was poisoned by the Indian Pipe, as she was handling this plant when she crushed it with the results before mentioned. The examination took place at her home after the plant had been brought from the woods. Of course it is barely possible that there might have been some roots of *Rhus* about it when she was handling it; although the particular specimens, which are in my Herbarium, show no indications of any matters belonging to another plant, nor do I remember to have seen any when the plants were first given to me. The young lady says she has often handled the *Rhus Toxicodendron* without any bad effects; but this having been done even several times might not be conclusive evidence at all, that under other states of the constitution this subtile poison would not reach her.

Of course with the experience of Dr. Kunze and others made known to me, I recognize that the cumulative evidence bears strongly against the isolated case we have presented. But I have given the facts just as they were given to me, without knowing that the plant had any particular value in therapeutics. If it is not a genuine case of poisoning by this plant, the evidence, all things considered, is very strong that way.—A. H. YOUNG, *Lafayette, Ind.*

BRYUM ATWATERIÆ.—The discoverer of this plant was, as Elizabeth Emmerson of Vermont, a pupil at the Way Seminary in 1828, when the writer (then Mrs. Lincoln) was preparing for publication her lectures on Botany. Some forty years after this, the former pupil visited the writer at her home in Baltimore, introducing her husband, S. T. Atwater, Esq., of Chicago. She had cultivated the love of science imbibed from her school teachings. In affluent circumstances, without children, and with an indulgent husband who was happy to gratify her literary and scientific taste, she had traveled much and made extensive researches in Natural Science.

After the renewal of our acquaintance she was a faithful and attentive correspondent. At my suggestion she presented to the "Maryland Academy of Sciences" a valuable collection of four hundred botanical specimens. She was elected an honorary member of this society, which after her death at Buffalo, N. Y., in April, 1878, paid a fitting tribute to her memory, as an earnest laborer in the cause of science.

We take from a Michigan paper an extract from an address of Prof. Albert D. Hager, before the Chicago Historical Society:

"Mrs. Atwater was interested in several departments of science, but Botany was her favorite study. During a sojourn in California she preserved more than 2,000 specimens of plants, several of which were new to science." After recounting her valuable historical records, her philanthropic efforts and her active and generous benevolence, the Professor closes by this remark, "It may, in truth, be said that the world is made the better as well as the wiser for her having lived in it."

The following extract from a letter of Feb. 12th, 1878, to the writer, gives the history of the discovery and naming of the *Bryum Atwateriæ*:

"I forward for your acceptance this little specimen. I believe you will feel an es-

pecial interest in it, from its having been found by your former pupil. I gathered it with other plants, at the foot of the Yosemite Falls, in the Yosemite Valley, Cal., on June, 24th, 1873. It being an infertile specimen, I hesitated relative to pressing it, but was attracted by its peculiarity and preserved several tufts of it. Attaching no particu, lar value to it—being not in fruit—yet greatly interested in its appearance, I did not send it with other plants, to friends for whom in my travels I am in the habit of collecting, but chanced to include one in a small parcel to my friend, Dr. Chas. Mohr, a German gentleman, resident in Mobile, Ala., and a fine botanist. He noticed it as new to himself and immediately forwarded the tuft to *Dr. Karl Muller*, the distinguished Bryologist in Germany. I quote from Dr. Mohr's letter in reference to it: 'Dr. Muller describes that fine brown moss, of which you had sent me an infertile specimen, as a new species, naming it in honor of its enthusiastic discoverer, *Bryum Atwateriæ*. It is nearly allied to the *B. alpinum* of Europe.' It was reported in the 'Bulletin of the Torrey Botanical Club,' New York, August, 1874."

To this account of the discovery and naming of the plant under consideration, we will add that though the name of the genus *Bryum* is ascribed to Linnæus, it seems to have been merged in with other genera of Mosses, and is not found in the works of many of our distinguished American Botanists. Lindley refers to Hooker for a description of the family *Bryaceæ*, of which *Bryum* may be considered a type. He enumerates more than a hundred genera of *Bryaceæ*, and says: "The little plants, the *Urn Mosses*, form one of the most interesting departments of Cryptogamous Botany; they are distinctly separated from all the previous tribes by the peculiar structure of their reproductive organs." The position of the *Bryaceæ*, according to Lindley, is between *Jungermanniaceæ* and *Andræaceæ*. We have not seen what the distinguished Bryologist, Karl Muller, says of this peculiar family of plants. That he has honored our countrywoman in naming her as a discoverer, entitles him to our gratitude.

I will add to this article but one short sentence, worth more than all to her who is now in the better world—she was a Christian.—ALMIRA LINCOLN PHELPS, *Baltimore, Maryland.*

THE NATIVE FLOWERS AND FERNS OF THE UNITED STATES; BY THOMAS MEEHAN; Illustrated by Chromolithographs, Boston, L. Prang & Co.—We have received five parts of the first volume of this handsome publication. It is a charming work and well calculated to arouse an interest in the study of botany among those who have considered it too dry and technical. The colored plates are beautiful and the descriptions and histories given in the accompanying text are written in such a popular way as to interest and instruct even those who have no knowledge of botany. No special order is followed, but plants are selected representing as great a range of country as possible, so that even in one part the reader is carried over considerable of the territory of the United States. In his selection of plants, too, Mr. Meehan, shows that he is a true botanist, for he sees beauty in plants that would escape the ordinary observer, and deems them worthy of a place and plate. The price too (50 cents a part) puts the work within every ones reach. To show something of its nature the following list of contents of the first parts is given. It must be remembered that every species in the list also represents a colored plate.

Part I.—*Tradescantia Virginica, Geum triflorum, Gelsemium sempervirens, Polypodium incanum.* Part II.—*Viola cucullata, Anemone nemorosa, Aquilegia chrysantha, Pachysandra procumbens.* Part III.—*Heloniax bullata, Carex stricta, Cuphea viscosissima, Thalictrum dioicum.* Part IV.—*Anemone patens*, var. *Nuttalliana, Orchis spectabilis, Symplocarpus fœtidus, Pedicularis Canadensis.* Part V.—*Erythronium Americanum, Phlox subulata, Saxifraga Virginiensis, Arctostaphylos Uva-ursi.*

ERRATA.—In No. 8, Vol. 3, p. 67, 4th line from top, for "pubescent" read "procumbent." l. c. 26th line, read "*uncinata*" for "*runcinata*."